

**DEVELOPMENT OF PROMISING SOLUTIONS FOR SERVICE PROCESSES
OF PUBLIC TRANSPORT INFRASTRUCTURE.
(IN THE CASE OF THE CITY OF URGANCH).**

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Abstract: The decisive factor in the development of modern cities is the development of their road transport infrastructure. The UN predicts that by 2050, the population of the earth will be 9.1 billion. 70% of them live in cities, as predicted. This article talks about the development of promising solutions for public transport infrastructure service processes on the example of the city of Urganch.

Key words: Urban infrastructure, driverless transport, transport, industry, living environment, sensor systems,

In view of rapid population growth and ever-increasing fleet growth rates, scientists, engineers, technologists and manufacturers around the world are looking for effective innovative ways to eliminate traffic error and end congestion in major cities. are looking for new ways to form transport infrastructure. Among the numerous conceptual proposals of scientists and engineers, I began to forecast several important directions of future transport development, which, in my opinion, are capable of overloading the entire modern transport infrastructure:

1. Changes in the city and types of public transport- Engineering systems, engines, constructions, materials, types of automobile fuel are revolutionizing. There will be cars that move not only on the road, but also on water (river taxis) and in the air. The period of transition from internal combustion engines to ecological types of electromotive and hydrogen engines that do not emit harmful emissions has begun. In addition to the public transport that runs across the planet, there will also be surface string transport, high-speed tape recorders and hypersonic vacuum transport.

2. The method of owning a motor vehicle and the principles of its use will change. The number of private cars begins to decrease, urban dwellers begin to switch to rental transport and on-demand transport, their number continues to grow at a high rate over time. A serious modernization of public transport is expected. This type of transport is given priority and comfort for moving on city roads.

3. Transition to intelligent control systems and automation of cars. Experts say that by 2040, 75% of cars will move without a driver. Self-driving cars interact with each other, avoiding collisions and optimizing routes. The use of vehicle automation technologies can increase the efficiency of transportation. According to estimates, 120,000 cars can pass on one lane at 120 km/h in one hour when using autopilots, and 2-3 thousand cars when driven by people. According to scientists, the number of driverless cars will increase compared to regular cars, and traffic lights and road signs created for people will begin to disappear. Because robotic sensors do not need them.

4. Emergence of new types of roads.

We are on the verge of the evolution of not only cars, but also roads. Today, technological developments have appeared to transition from traditional asphalt pavement to new types of pavements and new engineering-constructive road solutions.

For example, in the Dutch city of Rotterdam, the construction of roads assembled from factory-made polyethylene tiles has begun. This project has its own advantages: it is more convenient to lay engineering communications together with slabs, the construction process is several times faster, the load on the load-bearing structures of roads and overpasses is reduced, the road surface is +40 to +80 °C it withstands the effects of temperatures, the durability and environmental friendliness of roads increases. In connection with the transition to renewable energy sources, interesting projects of roads and parking lots have appeared, which use solar cells in their coating. The road itself generates energy with the help of photovoltaic elements, the pavement is undulating and has anti-slip priority, and it can easily lift a 12-ton truck.

5. Car and road symbiosis.

The idea of using the technological possibilities of the car and the road together is also very interesting. For example, a vehicle receives the energy it needs to run from the road, where the road receives energy from renewable energy sources such as the sea, wind, and sun.

Russian scientists are working on the development of a new generation of intelligent road marking and the practical application of the glow-in-the-dark system. In this case, the road is used as a highway sign. This sign helps the driver to quickly aim and direct his car more accurately. However, in my opinion, it would be much more effective to create a "smart road network" equipped with sensors and radars. With the help of such sensors and radars, the road itself automatically controls the traffic - overtaking, stopping and redirecting, while transmitting information to driverless cars, optimizing their traffic flow along the traffic lanes. It will be possible. If there is an accident on the road, road works are carried out, if the weather conditions or visibility deteriorates, then the automatic systems of the road can transmit information and instructions to the on-board system of autopilots in advance.

6. New architectural - urban planning solutions.

Due to the technological changes taking place, architectural and urban planning solutions are also developing. Multi-level roads are promising roads that have different speed regimes and different types of vehicles. A single twelve-lane identical type, divided into six lanes by an oncoming traffic barrier, with chaotic traffic, constant and endless reconstruction and accidents due to traffic jams instead of wide highways, I proposed a compact (compact), four-lane, three-story road with two lanes in opposite directions. This allows to reduce the urban space occupied by traditional roads up to three times and to ensure safe traffic: if the first floor of the road is intended for public transport and special service vehicles moving at a speed of up to 60 km/h, its on the second floor, cargo transport moves at a speed of 60-100 km/h, and on the third floor, private light vehicles travel at a speed of 80-150 km/h. Greening, beautification of the empty city area and creation of lanes for individual transport - bicycles.

The quality management system in the field of transport imposes requirements on suppliers of parts, components and materials not only for manufacturers of automotive equipment, but also for companies providing transport services. These requirements are determined by ISO 16949 and ISO/TS 16949 standards compiled by "International Organization of Automobile Industry", "Association of Vehicle Manufacturers" and "International Organization for Standardization".

Based on ISO 16949, the requirements of the ISO 9001 standard include all additional requirements. They allow to ensure the high quality of details needed for the production of automobile transport, aggregates and components. Organizations that provide services for

transport manufacturers in thermal processing, welding, painting and other operations and are an integral part of the automobile industry can also undergo certification of compliance with the requirements of this standard. Currently, the number of enterprises working in the field of transport services and having a certified quality management system is increasing. The quality management system is developed and implemented in order to ensure stable high indicators of the organization's activity and as a management tool. With the help of the management tool, it is possible to formulate important issues and tasks in the sphere of quality for the company and achieve them with minimal material and manpower resources.

In conclusion, it should be noted that there are many problems facing the industry to improve the quality indicators of urban transport infrastructure. Coming to an optimal solution in this regard will serve the development of our country's economy in the future, and the improvement of our people's well-being. After all, it is no coincidence that the reforms of our country in this field are also aimed at developing the industry based on the requirements of the times.

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